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(71) Applicant (for all designated States except US): **THE GENERAL HOSPITAL CORPORATION** [US/US]; 55 Fruit Street, Boston, MA 02114 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MAHMOOD, Umar** [US/US]; 11 Williams Circle, Winchester, MA 01890 (US). **FUNOVICS, Martin, A.** [AT/AT]; Freyung 6/5, 1010 Vienna (AT). **WEISSLEDER, Ralph** [DE/US]; 11 Nicholes Lane, Peabody, MA 01960 (US).

(74) Agent: **FASSE, Peter, J.**; Fish & Richardson P.C., 225 Franklin Street, Boston, MA 02110-2804 (US).

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(54) Title: MULTI-CHANNEL OPTICAL IMAGING

(57) Abstract: The invention features beam splitter arrays that include a first beam splitter that outputs a first beam of optical radiation having a power spectral density including a substantial portion of a white light spectrum from a first output port, and that outputs a second beam of optical radiation having a power spectral density including a substantial portion of a first non-white light spectrum and a substantial portion of a second non-white light spectrum from a second output port, from an input beam received at a first angle of incidence; a second beam splitter, arranged to receive the second beam at a second angle of incidence, that reflects a substantial portion of the second beam having a power spectral density including the first nonwhite light spectrum, and that transmits a substantial portion of the second beam having a power spectral density including the second non-white light spectrum; and a reflector arranged to reflect a substantial portion of the beam transmitted by the second beam splitter. The new arrays can be used in systems and methods for multi-channel optical imaging, e.g., of samples such as biological tissue, both in vitro and in vivo.



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